

ON AUSTRALIAN DERMESTIDAE. PART III.

THE GENERA *ANTHRENOCERUS* ARROW AND *ORPHINUS* MOTSCHL.; ALSO A NOTE ON THE
GENUS *CRYPTORHOPALUM* GUÉR.

By J. W. T. ARMSTRONG.

(Five Text-figures.)

[Read 31st March, 1943.]

CRYPTORHOPALUM Guér.

The Australian species referred to this genus by Reitter and Blackburn have mostly been transferred to either *Anthrenocerus* or *Orphinus* by Arrow (*Ann. Mag. Nat. Hist.*, (8) xv, 1915, 437, 444). Of the remaining species, *C. casuarinae* Blackb., *ceciliense* Blackb., *nealense* Blackb., and *interioris* Blackb., appear also to belong to *Orphinus*, and, as already pointed out by Lea (*Trans. Roy. Soc. S. Aust.*, xlviii, 1924, 48), *C. obscurum* MacL., of which I have seen the type in the Australian Museum, is not a Dermestid at all, but belongs to the subfamily Anobiinae. *Cryptorhopalum* is therefore not represented in Australia.

ANTHRENOCERUS Arrow.

Arrow described this genus (*Ann. Mag. Nat. Hist.*, (8) xv, 1915, 443) to receive the five species grouped by Blackburn as "aberrant Cryptorhopala" (*Trans. Roy. Soc. S. Aust.*, xxvii, 1903, 169). These are *A. (Anthrenus) australis* Hope (= *erichsoni* Reitt.), *confertim* Reitt. (= *(Anthrenus) flindersi* Blackb.), *variabile* Reitt., *4-fasciatum* Blackb. and *terzonatum* Blackb. At the same time he described two more, *A. bicolor* and *pulchellus*. I believe I am acquainted with all these. Nine new species are described in this paper, bringing the total to sixteen.

I have been unable to find satisfactory structural characters for use in tabulating the species, and have had to rely almost entirely on colour and pattern. Several of the undescribed species were confused with *A. australis* Hope, and, of these, figures have been given so that they might be more readily distinguished in future.

The species of *Anthrenocerus* may be tabulated as follows:

- A. Elytra with 3 castaneous maculae *trimaculatus*, n. sp.
- AA. Not thus.
- B. Clothing without trace of pattern.
- C. Clothing black *niger*, n. sp.
- CC. Clothing olivaceous *concolorous*, n. sp.
- BB. Clothing bicolorous with a more or less distinct pattern.
- C. Elytra black or piceous.
- D. Elytral pattern confined to an antemedial fascia and sub-basal spots
..... *confertim* Reitt. = *flindersi* Blackb.
- DD. Elytral pattern more extensive.
- E. Clothing mainly bronze *chaliceous*, n. sp.
- EE. Not thus.
- F. Elytra maculate, the pattern consisting mainly of small spots.
- G. White setae longer (the spots having a tufted appearance); pronotum wider
towards apex than in next two spp. *maculosus*, n. sp.
- GG. Light setae shorter and finer; pronotum more evenly rounded towards apex.
- H. Broader; angle formed by lateral margin of elytra with that of pronotum
almost straight *capdensus*, n. sp.
- HH. Narrower; angle formed by lateral margin of elytra with that of pronotum
less obtuse *signatus*, n. sp.
- FF. Elytra fasciate or sub-fasciate.
- G. Fasciae complete.

- H. Elytra with 3 fasciae and at least basal and apical spots.
 I. Pale clothing less extensive and white only *australis* Hope = *erichsoni* Reitt.
 II. Pale clothing more extensive and consisting largely of stramineous setae *blackburni*, n. sp.
 HH. Elytra with 4 fasciae *4-fasciatus* Blackb.
 GG. Fasciae widely interrupted at suture; pale clothing in 3 zones *terzonatum* Blackb.
 CC. Elytra brown.
 D. Pronotum black. (Elytra with 4 fasciae and apical spots.) *bicolor* Arrow
 DD. Pronotum brown.
 E. Form sub-rotund and *Anthrenus*-like *convexus*, n. sp.
 EE. Form normal.
 F. Pronotum fusco-piceous; elytra castaneous *variabile* Reitt.
 FF. Pronotum and elytra ferrugineous *pulchellus* Arrow

ANTHRENOCERUS TRIMACULATUS, n. sp.

Ovate, black, sub-nitid, convex, elytra clothed with semi-erect piceous setae which are pale on the castaneous areas, elytra with two large humeral maculae extending almost to suture and apices castaneous, antennae and legs testaceous becoming fuscous, clothing of ventral surface sparse and dark.

Pronotum moderately transverse, widest at base, this strongly lobed, posterior angles not strongly acute, sides at first gradually narrowed then evenly rounded to apex, moderately and closely punctate. Elytra as wide as prothorax at base, widening a little to, and slightly constricted behind, shoulders, thence parallel for approximately half length, then evenly rounded to apex, rather coarsely and closely punctate.

Size: 2.5 mm. \times 1.4 mm., 1.6 mm. \times 1 mm.

Hab.—N.S.W.: Bogan R. (J. W. T. Armstrong). S. Aust. (one example in Macleay Museum).

Cotypes in the South Australian, Macleay and Australian Museums, F. E. Wilson's and the author's collections.

Twenty-six specimens before me represent a very distinct species, readily distinguished from all others known to me by the trimaculate elytra. Its form is rather narrow.

ANTHRENOCERUS NIGER, n. sp.

Ovate, black, nitid, clothed with short coarse semi-depressed black setae, antennae, tibiae and tarsi fusco-piceous, ventral clothing black.

Pronotum rather strongly transverse, widest at base, this fairly strongly lobed, posterior angles acute, sides evenly rounded to apex, lightly and sparsely punctate. Elytra as wide as prothorax at base, expanding a little to shoulders, thence parallel for approximately half length, then evenly rounded to apex, moderately and closely punctate.

Size: 3 mm. \times 1.8 mm.

Hab.—N.S.W.: Bogan R. (J. W. T. Armstrong).

Holotype unique in the author's collection.

I have no hesitation in describing this species from a single specimen, as the complete absence of light-coloured setae makes it impossible to confuse it with any other described species.

ANTHRENOCERUS CONCOLOROUS, n. sp.

Ovate, convex, sub-opaque, piceous, uniformly clothed with rather broad, depressed olivaceous setae, legs and antennae testaceous, ventral clothing pallid.

Pronotum widest at base, this strongly lobed, moderately transverse, posterior angles acute, sides evenly rounded to apex, rather lightly and closely punctate. Elytra as wide as prothorax at base, expanding a little to shoulders, thence gradually narrowing for about two-thirds of length, then evenly rounded to apex, moderately and very closely punctate.

Size: 2.6 mm. \times 1.75 mm., 2.4 mm. \times 1.6 mm.

Hab.—N.S.W.: Galston (Lea and Dumbrell).

Holotype in South Australian Museum, paratype in the author's collection.

The two specimens before me are sufficiently distinguished from all other species known to me by the uniform olivaceous clothing of the dorsal surface.

ANTHRENOCERUS CHALCEOUS, n. sp.

Ovate, convex, sub-nitid, piceous, obscurely patterned with bronze and greyish depressed setae, antennae and legs testaceous, ventral clothing pallid.

Pronotum moderately transverse, widest at base, this strongly lobed, posterior angles acute, sides rounded to apex and narrowly margined, moderately and closely punctate. Elytra as wide as prothorax at base, expanding a little to shoulders, thence gradually narrowing for approximately half length, then evenly rounded to apex, moderately and closely punctate.

Size: 2.25 mm. \times 1.6 mm., 2.1 mm. \times 1.4 mm.

Hab.—N.S.W.: Galston (Lea and Dumbrell).

Cotypes in South Australian Museum and the author's collection.

Six specimens from the one locality show some variation. The pattern is that prevalent in the genus, consisting principally of three elytral fasciae and the sides of the pronotum pale. It is vague and indefinite, and the fasciae tend to break up into spots on some specimens. The setae are not as broad as in *A. concolorous*, n. sp., and in that species the pronotum is not at all margined. The predominantly bronze clothing should separate it from all described species.

ANTHRENOCERUS MACULOSUS, n. sp. Fig. 1.

Sub-ovate, black, sub-nitid, convex, clothed with depressed black and white setae of moderate length, the latter disposed in tufts, ventral surface clothed with short white setae.

Pronotum short and strongly transverse, widest at base, this strongly lobed, posterior angles acute, sides narrowing then abruptly rounded to apex, deeply, closely and moderately punctate. Elytra slightly narrower than prothorax at base, widening to shoulders, thence narrowing for approximately half length, then evenly rounded to apex, coarsely and very closely punctate.

Size: 2.85 mm. \times 2 mm., 2.65 mm. \times 1.5 mm.

Hab.—Northern Territory: King R. (7.1.16).

Cotypes in the National Museum and the author's collection.

The white setae form approximately thirty-one spots on the elytra and eight on the pronotum, the largest being on the basal lobe. The elytral arrangement of these roughly corresponds to the pattern of *A. australis* Hope and *A. bicolor* Arrow. The more quadrate pronotum and coarser puncturation separate this species from both, and its black elytra further distinguish it from the latter.

ANTHRENOCERUS CONDENSUS, n. sp.

Broadly ovate, black, sub-nitid, convex, clothed with short black and fulvous depressed setae, the latter confined to the posterior lateral area of the pronotum, the medial lobe and occasional small spots on the elytra, also the metasternal episternum, antennae, tibiae and tarsi fusco-ferrugineous.

Pronotum strongly transverse, widest at base, this strongly lobed, posterior angles acute, sides almost evenly rounded to apex, deeply, closely and moderately punctate. Elytra as wide as prothorax at base, widening a little to shoulders, thence gradually narrowing for about half length, then evenly rounded to apex, coarsely and more or less confluent punctate.

Size: 2.8 mm. \times 1.8 mm.

Hab.—N.S.W.: Bulladelah (J. W. T. Armstrong).

Cotypes in the author's collection.

Two specimens before me belong to the most broadly compact species I have seen. The angle formed where the lateral margin of the elytra meets that of the pronotum is almost straight. This character distinguishes the species from *A. signatus*, n. sp. and *A. australis* Hope. The latter and *A. blackburni*, n. sp. differ from it in their fasciate elytra, and *A. maculosus*, n. sp. differs in its larger more conspicuous white spots. It is possible that my specimens may be stained, as one in the National Museum, taken by H. J. Carter on the Blue Mountains, differs only in the light setae being white.

ANTHRENOCERUS SIGNATUS, n. sp. Fig. 2.

Sub-ovate, black, sub-nitid, convex, clothed with short fine depressed black and white setae, the latter disposed principally in an intricate pattern on the pronotum and base of elytra and as the remnants of two elytral fasciae, one post-medial and one sub-basal, antennae and tarsi fusco-ferrugineous, ventral surface clothed with fine white setae.

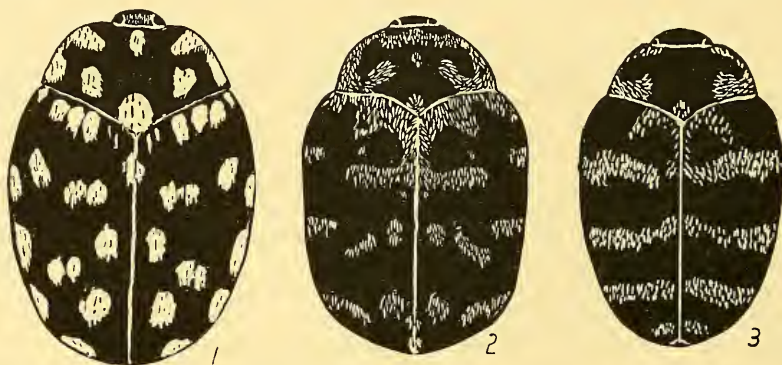
Pronotum transverse, widest at base, this strongly lobed, posterior angles barely acute, sides evenly rounded to apex, deeply, closely and moderately punctate. Elytra as wide as prothorax at base, widening to shoulders, thence gradually narrowing for approximately half length, then evenly rounded to apex, coarsely and closely punctate.

Size: 3 mm. \times 1.8 mm., 2.2 mm. \times 1.5 mm.

Hab.—N. Qd. (Blackburn's collection); Cairns (F. P. Dodd).

Cotypes in the South Australian Museum and the author's collection.

This species, of which there are fourteen specimens before me, resembles *A. maculosus*, n. sp., but differs in outline and has shorter and finer setae and the elytra less strongly punctate. The pronotum is more strongly punctate than in *A. australis* Hope and *bicolor* Arrow, both of which are more regularly ovate.



Text-figures 1-3.

Fig. 1.—*Anthrenocerus maculosus*, n. sp. Fig. 2.—*A. signatus*, n. sp. Fig. 3.—*A. australis* (Hope) = *Cryptorhopalum erichsoni* Reitt.

ANTHRENOCERUS AUSTRALIS (Hope). Fig. 3.
(= *CRYPTORHOPALUM ERICHSONI* Reitt.)

Principal references.—*Anthrenus australis* Hope, *Ann. Mag. Nat. Hist.*, xi, 1843, 319; *Anthremis* australis* Hope, *Trans. Ent. Soc. Lond.*, iv, 1845, 105. *Cryptorhopalum australe*, Blackburn, *Trans. Roy. Soc. S. Aust.*, xxvii, 1903, 167, 169. *Anthrenocerus australis*, Arrow, *Ann. Mag. Nat. Hist.*, (8) xv, 1915, 443. *Cryptorhopalum erichsoni* Reitt., *Verh. naturf. Ver. Brünn.*, xix, 1880 (1881), 55-56.

This species is evidently not so common as has been supposed, as there are several closely allied species that have been confused with it in collections. Some specimens, representing either a variety or new species, have the pattern much fainter than normal and seem more nitid. There is also a series, in the Lea Collection, from Western Australia, of smaller insects (2 mm. or less) with longer clothing, that otherwise I cannot distinguish from this species. The description of *Cryptorhopalum erichsoni* Reitt. leaves no doubt in my mind as to the synonymy suggested by Blackburn. I believe his hesitation arose through his having failed to separate some of the allied species.

ANTHRENOCERUS BLACKBURNI, n. sp. Fig. 4.

Ovate, piceous, sub-nitid, convex, clothed with short depressed fusco-piceous and stramineous setae, the latter, interspersed with white (principally in the three central elytral fasciae), covering all the pronotum, except a small area of the disc, and forming

* *Anthremis* appears to be a misprint as Hope certainly intended to refer his species to *Anthrenus*.

five irregular elytral fasciae, basal, antemedial, post-medial, sub-apical and apical, also a sutural margin, ventral clothing stramineous.

Pronotum transverse, widest at base, this rather lightly lobed, posterior angles barely acute, sides evenly rounded to apex, rather finely, but distinctly and closely, punctate. Elytra as wide as prothorax at base, expanding a little to shoulders, thence parallel for approximately half length, then evenly rounded to apex, more coarsely and closely punctate.

Size: 3 mm. \times 2 mm., 2.1 mm. \times 1.2 mm.

Hab.—Vict. (Blackburn). N.S.W.: Bombala (Rev. A. J. Barrett); Illawarra (Lea Collection).

Holotype in the South Australian Museum, Paratypes in South Australian and Australian Museums.

Three specimens before me have been confused with *A. australis* Hope, but differ in their more extensive pale clothing which is predominantly stramineous in colour. There are more specimens in the National Museum, but unfortunately I returned these as *A. australis*, before realizing that there were several species confused under that name. Three specimens from New South Wales seem to be a wider species very near this, but I hesitate to describe them without more material.

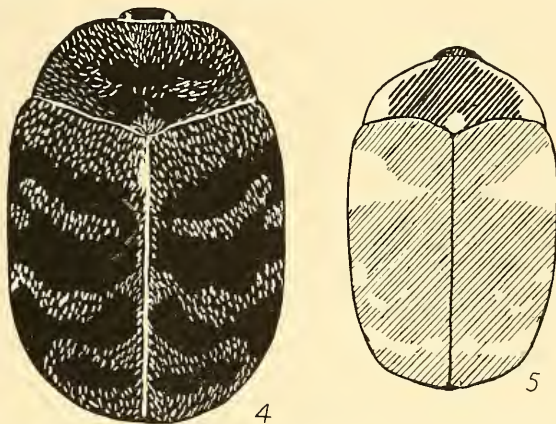


Fig. 4.—*Anthrenocerus blackburni*, n. sp. Fig. 5.—*A. convexus*, n. sp.

ANTHRENO CERUS BICOLOR ARROW.

Ann. Mag. Nat. Hist., (8) xv, 1915, 444.

This species is widespread and occurs in New South Wales, Victoria and South Australia, besides the type locality, North-West Australia. It is frequently identified as *Cryptorhopalum australe* Hope. Blackburn mistook it for that species.

ANTHRENO CERUS CONVEXUS, n. sp. Fig. 5.

Ovate, convex, sub-rotundate, sub-nitid, pronotum brunneous, elytra, legs and antennae ferrugineous, clothed with short, depressed testaceous setae patterned with pallid white, ventral surface fusco-piceous and clothed with fine pallid setae.

Pronotum transverse, widest at base, this strongly lobed, posterior angles acute, sides evenly rounded to apex, finely and sparsely punctate. Elytra very slightly narrower than prothorax at base, expanding a little to shoulders, thence lightly curved and gradually narrowing for approximately two-thirds of length, then evenly rounded to apex, not so lightly and more closely punctate than pronotum.

Size: 2.75 mm. \times 1.8 mm.

Hab.—Cent. Aust: Everard Ranges (Capt. S. A. White).

Holotype unique in South Australian Museum.

The *Anthrenus*-like facies at once singles this insect out from the other members of the genus. The white setae are confined, on the pronotum, to a roughly kidney-shaped band of moderate width on the lateral margins, the medial lobe and a few

along the anterior margin, and, on the elytra, to an irregular humeral patch produced narrowly and obliquely towards the suture, but not reaching it, a lateral spot behind the centre with a smaller one inside and behind it, and a sub-apical irregular fascia. The puncturation of the pronotum is much finer and sparser than in *A. variable* Reitt. and *terzonatum* Blackb.

ANTIIRENOCERUS PULCHELLUS ARROW.

Ann. Mag. Nat. Hist., (8) xv, 1915, 444.

Nine specimens, in the National Museum from King R., Northern Territory, agree very well with the description of this species. At first glance they resemble *A. variable* Reitt., but in that species the prothorax is piceous and the clothing longer and with no yellow.

ORPHINUS Motsch.

Two species of this genus, *O. minimus* Arrow and *rufopygus* Pic, have been described from Australia. Arrow also transferred to it three of the species placed in *Cryptorhopalum* by Blackburn (*Trans. Roy. Soc. S. Aust.*, xiv, 1891, 130; i.e., xxvii, 1903, 166-8), i.e., *australicum* Blackb., *quornense* Blackb. and *woodvillense* Blackb. = *eucalypti* Blackb. *Cryptorhopalum casuarinae* Blackb., *ceciliense* Blackb., *nealense* Blackb. and *interioris* Blackb. also belong to it. *O. rufopygus* Pic (*Ent. Nachr. Bl.*, vii, 1933, 71) is, obviously, from the description, synonymous with *Thaumaglossa nigricans* MacL., and therefore does not belong to the genus. Two new species are now added, bringing the Australian total to ten.

The following tabulation is not entirely satisfactory. *O. nealense* Blackb. would be better associated with *casuarinae* Blackb. and *ceciliense* Blackb., from both of which it differs in the antennal club of both sexes being larger. The elytral pattern is obscure.

The Australian species of *Orphinus* may be tabulated as follows:

- A. Elytra bicolorous independently of pubescence.
 - B. Elytra pale, each with two infuscated spots.
 - C. Ovate; elytra very closely punctate *ceciliense* Blackb.
 - CC. Elongate-ovate; elytra less closely punctate *casuarinae* Blackb.
 - BB. Elytra dark, with lighter fasciae or maculae.
 - C. Elytra maculate *australicum* Blackb.
 - CC. Elytra fasciate.
 - D. Elytra with 1 fascia and apical maculae *interioris* Blackb.
 - DD. Elytra with 2 fasciae, basal and apical maculae.
 - E. Ovate; elytra noticeably wider than prothorax *woodvillense* Blackb. = *eucalypti* Blackb.
 - EE. Elongate-ovate; elytra scarcely, if at all, wider than prothorax *occidentalis*, n. sp.
 - DDD. Elytra with two obscure fasciae only *nealense* Blackb.
 - AA. Elytra unicolorous except for pubescence.
 - B. Clothing bicolorous.
 - C. Smaller, 1.5 mm. long; more regularly ovate; more sparingly punctate, and more shining *minimus* Arrow
 - CC. Larger, 2 mm. long; less regularly ovate; more closely punctate, and less nitid *quornense* Blackb.
 - BB. Clothing uniformly piceous *atrous*, n. sp.

ORPHINUS CASUARINAE (Blackb.) and O. CECILIENSE (Blackb.).

Trans. Roy. Soc. S. Aust., xxvii, 1903, 169-70.

These two species are very close, and I believe them to be sexes of only one, but there is insufficient material before me to allow of a definite conclusion.

ORPHINUS OCCIDENTALIS, n. sp.

Elongate-ovate, fusco-piceous, sub-nitid, clothed with long, fine piceous and ashy-white setae (the latter on the pronotum and paler parts of the elytra), antennae and legs testaceous, elytral markings rufo-testaceous.

Pronotum rather strongly lobed at base, finely and sparsely punctate. Elytra scarcely, if at all, wider than prothorax, coarsely and very closely punctate, with two zig-zag fasciae, apex and part of base rufo-testaceous. (This colour may invade the base of the pronotum).

Size: 2.5 mm. \times 1.6 mm., 2.1 mm. \times 1.2 mm.

Hab.—W. Aust.: Swan R. and Darling Ranges (A. M. Lea); Pinjarra (Goerling); Behn R.

Cotypes in the South Australian Museum and the author's collection.

This species closely resembles *O. woodvillense* Blackb., but differs in being noticeably narrower and having the pronotum much more finely punctate. *O. woodvillense* has the elytra definitely wider than the prothorax. There are eight specimens before me.

ORPHINUS NEALENSE (Blackb.).

Trans. Roy. Soc. S. Aust., xxvii, 1903, 170.

There are two specimens in my collection, from the Bogan R., New South Wales, that appear to be males of this species. The antennal club is very large and circular.

ORPHINUS QUORNENSE (Blackb.).

PROC. LINN. SOC. N.S.W., ix, 1894, 93.

Fifteen specimens from north Queensland agree with the description of this species, of which the South Australian Museum contained no named specimen.

ORPHINUS ATROUS, n. sp.

Sub-ovate, black, nitid, convex, clothed with rather short piceous setae, antennae and tarsi testaceous.

Pronotum very finely and sparsely punctate, medial lobe long, not wide and rounded at apex. Elytra a little wider than prothorax, expanding to shoulders, thence gradually narrowing for approximately two-thirds length, then evenly rounded to apex, more strongly and closely punctate than pronotum. Terminal segment of antennae (σ) almost circular.

Size: 2.3 mm. \times 1.5 mm., 2 mm. \times 1.25 mm.

Hab.—Qd.: Cairns.

Two specimens before me appear to be sexes of this species. I cannot see the antennae of the one I take to be the female. Its elytral puncturation is rather coarser. The species is at once distinguished among those previously described from Australia by its shining black colour and uniformly piceous clothing. It must be near *O. funestus* Arrow, a species from Ceylon, which has grey clothing and would seem from the description to be wider.
